### STATEMENT OF BASIS

Norco Refinery
Motiva Enterprises LLC
Logistics I and II
Norco, St. Charles Parish, Louisiana
Agency Interest Number: 1406
Activity Number: PER20020013 and PER20020014
Draft Permits 2912-V0 and 2913-V0

#### I. APPLICANT:

Company:

Motiva Enterprises LLC Post Office Box 10 Norco, Louisiana 70079

**Facility:** 

Norco Refinery
Logistics I and II Units
15536 River Road, Norco, St. Charles Parish, Louisiana
Approximate Coordinates: Latitude 29 deg., 59 min., 58 sec. and Longitude 90 deg., 24 min., 13 sec., Zone 15

Responsible Official:

Ms. Anne-Marie Ainsworth, General Manager

### II. FACILITY AND CURRENT PERMIT STATUS

Motiva Enterprises (Motiva), LLC owns and operates a petroleum refinery, Norco Refinery, in Norco, St. Charles Parish, Louisiana. The Norco Refinery process crude oil, natural gas condensate, and partially refined products such as gas oil, to produce liquefied petroleum gas, ethylene, propylene, chemical products, finished gasoline, diesel, aviation fuel, heating oils, residuals, petroleum coke, and sulfur.

Historically, this site consisted of the Shell Norco Refining Company and Shell Chemical Company (Shell). In 1998; Shell Oil Company, Texaco Inc. and Saudi Aramco formed Motiva Enterprises (Motiva), LLC, a joint venture combining major elements of the three companies' eastern and Gulf Coast refining and marketing businesses. Based on new business ventures Shell Chemical Company and Motiva are viewed as separate sites. Motiva is splitting the old permits and is now permitting all the units and equipment now being operated under the Norco Refinery. This statement of basis is for two permits, Logistics I and Logistics II which is a split of Part 70 Permit No. 2510-V1 dated July 21, 2000.

The Logistics I permit comprise of the storage tanks, distribution piping system, marine vapor recovery, wastewater treatment, oil water separation, flares, and equipment fugitives now owned by Motiva.

The Logistics I, Permit No. 2913-V0, is being issued by updating the equipment inventory (i.e. remove the Shell equipment) based on the split between Shell and Motiva and other reconciliation as follows:

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- 1. Incorporate the updated emissions based on the Case-by-Case Insignificant Activities approved for Catalyst Regeneration emissions flaring (submittal dated May 19, 2004); HCU and H2 startup/shutdown emissions flaring (submittal dated December 14, 2004); CR-1, CR-2 and NHT startup/shutdown emissions flaring (submittal dated February 3, 2005); NHT/CR-1 Knockout Pot and NG Purge Stream emissions flaring (submittal dated February 16, 2005); CR-1 Depressuring emissions flaring (submittal dated May 19, 2005); CR-2 Chloride Adsorber Vent flaring (submittal dated March 27, 2006) and Automatic Distillation Analyzer (submittal dated January 12, 2005);
- 2. Include and Split the Motiva sources into two permits Logistic I and Logistic II;
- 3. Create a Finished Gasoline Tank Cap and HCU/Coker Flare Cap; the two flares will be used as backup for each other to maintain operational flexibility;
- 4. Incorporate Coke Pile emissions permitted under a Small Source Exemption dated October 31, 2001;
- 5. Incorporate the emissions from the Pitstop Project approved on October 13, 2001;
- 6. Update the emissions based on upgrade of the seal configuration for two tanks:
- 7. Update the emission source inventory based on current operations after the split;
- 8. Update the General Condition XVII activities;
- 9. Incorporate Startup/Shutdown emissions; and
- 10. Incorporate Tank Cleaning emissions.

Permitted emissions from the Logistics I tons per year are as follows:

<b>Pollutant</b>	Permitted Emissions	
PM <sub>10</sub>	4.59	
$SO_2$	206.39	
$NO_X$	32.65	
CO	177.59	
VOC	1349.01	

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Comparison between before and after emissions are not being represented as the "Shared Sources" Part 70 Permit No. 2510-V1 dated July 21, 2000 included equipment and emissions from Shell Norco East Site (both from Shell and Motiva). This permit only deals with the equipment and emissions from Motiva Enterprises, LLC. There is no significant increase due to the split for any criteria pollutant except for carbon monoxide (CO). The CO emissions increase is mainly due to the reconciliation of emissions from the flares which better represents the actual operations at the facility after the split and the updated AP-42 (US EPA) emission factors. Other increases are due to the incorporation of startup/shutdown and tank cleaning emissions as permitted emissions. In the past startup/shutdown and tank cleaning emissions were covered under variances.

As stated above, the Logistics II, Permit No. 2912-V0, is being issued by updating the equipment inventory (i.e. remove the Shell equipment) based on the split between Shell and Motiva and other reconciliation as follows:

- 1. Incorporate the updated emissions from the Marine Vapor Recovery System based on an Administrative Amendment dated February 14, 2001;
- Include emissions from three diesel pumps used in the Storm Water Impoundment Basin. These were approved under General Condition XVII;
- 3. Incorporate updated emissions from the West Ops Ground Flare based on the Flare Gas Recovery System approved under an Authorization to Construct and Operate dated April 4, 2003; and incorporate the emissions from butylene tank truck loading operations;
- 4. Incorporate startup and shutdown emissions associated with the MTBE pitstop which are being routed to the West Ops Ground Flare approved under the Case-by-Case request dated December 18, 2003;
- 5. Incorporate the emissions from the installation of Tank F-517 and replacement Tank F-518 approved under the Part 70 General Permit No. 3054-V0 dated March 13, 2007;
- 6. Incorporate emissions from tank cleaning operations. The emissions from these operations were approved under variances in the past;
- 7. Update tanks (W-406, W-410, W-411, W412, W-427, and W-428) emission based on revised vapor pressures;
- 8. Update emissions from tanks (F-517 and XC-518) based on required tank seals and configuration under NSPS, Subpart Kb;
- 9. Update the emissions from Tank F-501 based on the Part 70 General Permit No. 3012-V0 dated November 16, 2005; and
- 10. Update the General Condition XVII Activities List.

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Permitted emissions from the Logistics II in tons per year are as follows:

<u>Pollutant</u>	Permitted Emissions	
$PM_{10}$	7.65	
SO <sub>2</sub>	14.09	
$NO_X$	76.85	
СО	314.05	
VOC	263.31	

Comparison between before and after emissions are not being represented as the "Shared Sources" Part 70 Permit No. 2510-V1 dated July 21, 2000 included equipment and emissions from Shell Norco East Site (both from Shell and Motiva). This permit only deals with the equipment and emissions from Motiva Enterprises, LLC. There is no significant increase due to the split for any criteria pollutant except for carbon monoxide (CO). The CO emissions increase is mainly due to the reconciliation of emissions from the West Ops Ground Flare which better represents the actual operations at the facility after the split and the updated AP-42 (US EPA) emission factors. Other increases are due to the incorporation of startup/shutdown and tank cleaning emissions as permitted emissions. In the past startup/shutdown and tank cleaning emissions were covered under variances.

Initial/Modified Title V Part 70 permits that were issued by the department include:

Permit #	Units or Sources	Date Issued
2501-V1	Coker, Distillation, and Kerosene Units	9/26/2006
2502-V1	Catalytic Reformers I and 2, Naphtha Hydrotreater, and Diesel Hydrotreater Units	1/10/2005
2510-V1	Logistics, Flares and Shared Sources	7/21/2000
2600-V0	Alkylation Unit	4/29/1999
2601-V0	Methyl Tertiary Butyl Ether Unit	4/29/1999
2602-V1	Residue Catalytic Cracking Unit	1/13/2004
2628-V1	Hydrogen Plant	1/10/2005

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Permit #	Units or Sources	Date Issued
2629-V1	Hydrocracker Unit	4/14/2005
2794-V1	Low Sulfur Gasoline Hydrotreater Unit	3/11/2005
2902-V0	Sulfur Plant No. 2	12/20/2004
2903-V0	Sulfur Plant No. 3	12/20/2004

Initial Title V Part 70 General permits issued by the department include:

Permit #	Units or Sources	Date Issued
2899-V0	Kerosene Treater Naphthenic	7/29/2004
	Caustic Tank	
3012-V0	Feliciana Pipeline Project	11/16/2005
3052-V0	HCU Condensate Injection Pumps	1/25/2007
3054-V0	Tanks F-517 and XC-518	3/13/2007

Renewal/ Modification permits under review by the department include:

Permit #	Units or Sources	Date Issued
2794-V2	Low Sulfur Gasoline Hydrotreater Unit	Under Review
2629-V1	Hydrocracker Unit	Under Review
2628-V2	Hydrogen Plant	Under Review
2902-V0	Sulfur Plant No. 2	Under Review
2903-V0	Sulfur Plant No. 3	Under Review
2501-V1	Coker, Distillation, and Kerosene Units	Under Review

### III. PROPOSED PERMIT/PROJECT INFORMATION

#### **Proposed Permits**

Logistics I: An application and Emission Inventory Questionnaires (EIQ), were submitted by Motiva Enterprises, LLC in August 2002; an updated application and EIQs requesting a renewal dated February 16, 2007; an addendum dated July 27, 2007; and additional information as of September 15, 2007

Logistics II: An application and Emission Inventory Questionnaires (EIQ), were submitted by Motiva Enterprises, LLC in August 2002, an updated application and EIQs requesting a renewal dated January 18, 2007 and additional information as of September 15, 2007.

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Project description

Logistics I and II: The facility proposes to reconcile the emission sources inventory, potential emission rates and regulatory determinations based on the split from Shell Chemical Company, recently approved permit actions, updated US EPA emission factors, and current operations.

#### IV. REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and is provided in the Facility Specific Requirements Section of the proposed permits. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms conditions and standards are provided in the Facility Specific Requirements Section of the proposed permits.

## National Emission Standards for Hazardous Air Pollutants: NESHAP From Benzene Waste Operations (BWON)

Chemical manufacturing plants, coke by-product plant and petroleum refineries are potentially subject to the provisions of BWON. Oil water separators, individual drain systems, stream stripping units, and other equipment that meet the definition of a waste management unit are subject to BWON. A waste management unit is defined as a piece of equipment used in the handling, storage, treatment, or disposal of waste. A waste is any material resulting from industrial operations that is discarded or accumulated, stored, or treated prior to discarded, recycled, or discharged. BWON specifically lists the following waste streams to which this regulation do not apply: 1) Waste in the form of gases or vapors that is emitted from process fluids; 2) Waste that is contained in a segregated storm water sewer system; and 3) Any gaseous stream from a waste management unit, treatment process, or wastewater treatment system routed to a fuel gas system.

The facility generates a total annual benzene (TAB) quantity of 10 megagrams per year or greater. The facility elects to take the 6 megagrams per year option as per the requirements of 40 CFR 63.342(e) where the total uncontrolled benzene quantity for the wastes shall not be greater than 6 megagrams per year.

National Emission Standards for Hazardous Air Pollutants: NESHAP From Synthetic Organic Chemical Manufacturing Industry

A chemical manufacturing process unit (CMPU) that manufactured one or more SOCMI chemicals listed in Table 1 of 40 CFR 63, Subpart F and that uses as a reactant or manufactures as a product, or co-product, one or more of the organic hazardous air pollutants listed in Table 2 of 40 CFR 63, Subpart F is potentially subject to the SOCMI HON. Some of the Chemical Manufacturing Process Units (CMPUs), located elsewhere

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in the refinery, may generate maintenance wastewater and Group 2 process wastewater and route it to the WWTP. Therefore, the WWTP is subject to Subpart F Maintenance Wastewater requirements and Subpart G Group 2 Process Wastewater requirements.

## National Emission Standards for Hazardous Air Pollutants: NESHAP From Petroleum Refineries

Petroleum refining process unit that contains or contacts one or more of the HAPs listed in Table 1 of Subpart CC is potentially subject to RMACT.

There are fugitive components within the units in organic HAP service. Therefore, the units are subject to the equipment leak provisions of this rule and Motiva demonstrates compliance by complying with the provisions of 40 CFR 63.648(c), the modified HON option.

A process wastewater stream in a refining process unit that contains one or more of the HAPs listed in Table 1 of Subpart CC are potentially subject to RMACT. Wastewater components within the process units are associated with petroleum refining process units. Therefore, the wastewater provisions of the RMACT are applicable. Group 2 streams are not subject to any control, monitoring, recordkeeping, or reporting requirements under RMACT. Group 1 wastewater streams must demonstrate compliance with RMACT by complying with NESHAP Part 61 Subpart FF, BWON.

The units contain tanks that receive maintenance wastewater and wastewater streams that are subject to the wastewater provisions of RMACT. When determining whether a tank must comply with the storage vessel provisions or the wastewater provisions of the RMACT, the function of the tank (whether the tank stores a waste or a product for use or reuse) is used as the basis of the determination. As defined in RMACT Subpart CC, a wastewater tank is not a storage vessel. Notably, the units contain Group 2 wastewater tanks. Group 2 wastewater tanks are not subject to any control, monitoring, recordkeeping, or reporting requirements under RMACT.

The No. 1 Crude Unit contains tanks that receive maintenance wastewater and wastewater streams that are subject to the wastewater provisions of RMACT. When determining whether a tank must comply with the storage vessel provisions or the wastewater provisions of the RMACT, the function of the tank (whether the tank stores a waste or a product for use or reuse) is used as the basis of the determination. As defined in RMACT Subpart CC, a wastewater tank is not a storage vessel. Notably, the No. 1 Coker Unit contains Group 2 wastewater tanks. Group 2 wastewater tanks are not subject to any control, monitoring, recordkeeping, or reporting requirements under RMACT.

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## National Emission Standards for Hazardous Air Pollutants: NESHAP From Synthetic Organic Chemical Manufacturing Industry

The petroleum refining process unit that contains or contacts one or more of the HAPs listed in Table 1 of Subpart CC is potentially subject to RMACT. Leaks from equipment in organic HAP service that are located in a petroleum refining process unit are subject to RMACT. Equipment in organic HAP service in the WWTP Area is subject to the RMACT. CRLLC demonstrates compliance with this rule by complying with the provisions of 40 CFR 63.648. A process wastewater stream in a petroleum refining process unit that contains one or more of the HAPs listed in Table 1 of Subpart CC are potentially subject to RMACT. The WWTP receives process wastewater streams and, therefore, the wastewater provisions of the RMACT are applicable to the WWTP Area.

Notably, the benzene concentration of the wastewater streams generated in the WWTP Areas is less than 10 ppmw. Therefore, the wastewater stream can be classified as a Group 2 stream. There are no controls, monitoring, recordkeeping, or reporting requirements for Group 2 wastewater streams. However, the Vacuum Trucks within the WWTP may load and transport process wastewater streams from refinery units that can be classified as Group 1 streams. Per 40 CFR 63.647(a), Group 1 wastewater streams must demonstrate compliance with RMACT by complying with NESHAP Part 61 Subpart FF, BWON.

The WWTP area contains tanks that receive maintenance wastewater and wastewater streams that are subject to the wastewater provisions of RMACT. When determining whether a tank must comply with the storage vessel provisions or the wastewater provisions of the RMACT, the function of the tank (whether the tank stores a waste or a product for use or reuse) is used as the basis of the determination. As defined in RMACT Subpart CC, a wastewater tank is not a storage vessel. Notable, the WWTP area contains Group 2 wastewater tanks. Group 2 wastewater tanks are not subject to any requirements under RMACT.

The equipment leak provisions of Subpart CC apply to all equipment that operates in organic HAP service. Equipment includes all pumps, compressors, pressure relief devices, sampling connections, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices, or systems required by Subpart CC. However, there are no fugitive components within the WWTP Area in organic HAP service. Therefore, the WWTP Area is not subject to the equipment leak provisions of this rule.

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Prevention of Significant Deterioration Applicability

These applications are a comprehensive updates to the current Part 70 Air Permit Applications and does propose insignificant modification to the facility. Insignificant modification does not require NSR/PSD review.

Air Modeling Analysis

No modeling was conducted as a part of this comprehensive update to the current Part 70 Air Permit Applications.

### Comprehensive Toxic Air Pollutant Control Program-Chapter 51

Toxic air pollutant emissions from fugitives must be controlled to a degree that constitutes MACT. The units comply with all applicable provisions of the Louisiana Air Toxics Program.

### Maximum Achievable Control Technology (MACT) requirements

The Louisiana Air Toxics Program (LA MACT) requires a major source emitting any Class I or II pollutant at a rate that exceeds the minimum emission rate for that pollutant to demonstrate compliance with the Maximum Achievable Control Technology (MACT) standards. Additionally, the Louisiana Air Toxics Program requires a major source emitting any Class I, II, or III toxic air pollutant greater than the minimum emission rate for that pollutant to determine its status of compliance with the applicable ambient air standard (AAS) defined for the pollutant.

The requirements of the LA MACT apply to the storage tanks and to the units as a whole. Motiva demonstrates compliance with the LA MACT requirements by complying with the most stringent applicable federal or state air toxics regulations as approved by LDEQ.

#### General Condition XVII Activities

Motiva is requesting General Condition XVII Activities under these permits. See SECTION VIII of the proposed permits.

#### **Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. Motiva is not requesting any Insignificant Activities under these proposed permits.

#### V. PERMIT SHIELDS

A permit shield was not requested.

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### VI. PERIODIC MONITORING

The Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the SPECIFIC REOUIREMENTS section of the proposed permits.

VII. APPLICABILITY AND EXEMPTIONS OF SELECTED SUBJECT ITEMS
See Proposed Permits.

### VIII. STREAMLINED REQUIREMENTS

The facility shall comply with NSPS, Subpart GGG in lieu of NESHAP, Subpart F and H, Subpart CC and LAC 33:III.2121 for fugitive emission sources except connectors. The facility shall comply with Louisiana Refinery MACT Determination July 26, 1994 for all connectors with a leak definition of 500 ppm. See SPECIFIC REQUIREMENTS section of the proposed permit in Logistics I. The fugitive emission sources for Logistics I and II (combined) are permitted under Logistics I proposed permit.

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#### IX. GLOSSARY

Carbon Monoxide (CO) - A colorless, odorless gas which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III. Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO<sub>x</sub>) - Compounds whose molecules consists of nitrogen and oxygen.

**Organic Compound** - Any compound of carbon and another element. Examples: Methane  $(CH_4)$ , Ethane  $(C_2H_6)$ , Carbon Disulfide  $(CS_2)$ 

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit:  $\geq 10$  tons per year of any toxic air pollutant;  $\geq 25$  tons of total toxic air pollutants; and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM<sub>10</sub>- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) - A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air

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Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

RMACT - Refinery Maximum Achievable Control Technology

Sulfur Dioxide (SO<sub>2</sub>) - An oxide of sulfur.

Title V permit - See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.